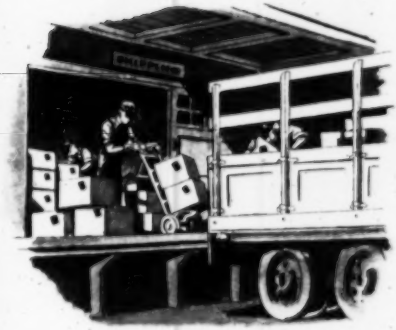
JUNE • 1959

Supervisory Management



PRODUCTION CONTROL

- Work saver
- Time saver
- Cost saver

A PROFESSIONAL CODE FOR SUPERVISORS

Do supervisors need a code?
Here's what SM's readers think.

HOW TO JUDGE PERFORMANCE

Evaluations can be more exact (and much more useful) if you use objective standards.

THE CASE OF THE CHRONIC COMPLAINER

What do you do when a senior employee feels he's behind the eight-ball?

AMERICAN MANAGEMENT ASSOCIATION

"This I Believe..."

How to Serve Democracy

By John W. Gardner

President, Carnegie Corporation of New York

HOW DOES ONE CONTRIBUTE to the greatness and strength of a free society? That is a question to which there are many true answers. One answer—simple but profoundly important—is this: If you believe in a free society, be worthy of a free society. Every good man strengthens society. . . .

More than any other form of government, democracy requires a certain optimism concerning mankind. The best argument for democracy is the existence of men who justify that optimism. It follows that one of the best ways to serve democracy is to be that kind of a man.

VOL. 4 NO. 6 • JUNE 1959

Supervisory Management

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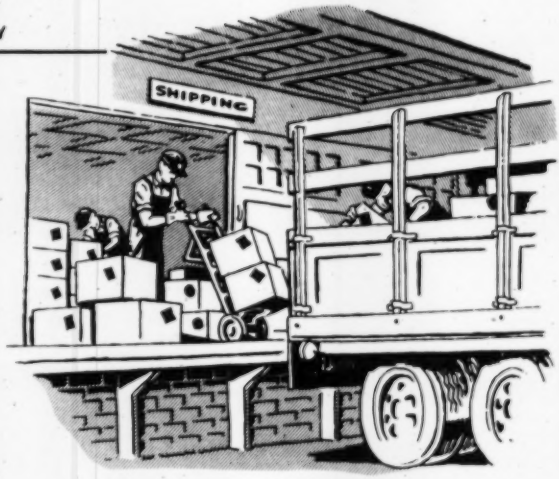
PRODUCTION CONTROL

TIME *Saver*
WORK *Saver*
COST *Saver*



By Robert H. Gring

AMA Production Planning and Control Course Director

Production control will help you get the right goods—at the right spot—at the right time.

NORMAN KING'S a pretty good supervisor, but . . ."

That's what his associates say. Among them, Norman's department has a reputation for constant machine breakdowns. What's worse, the breakdowns usually lead to a logjam, for jobs continue to flow in, even though some vital equipment may be down as long as a week.

Norman could solve all these problems by taking one logical step: establishing a close and cooperative relationship with his company's production-control department.

In fact, few functions in a manufacturing plant are more valuable to a line supervisor than that of production control. Time spent in learning to understand the department and its functions is well repaid.

The goal

What, exactly, is production control? As its name suggests, it is the planning and control necessary to bring off production smoothly. Its immediate purpose is to deliver the right material at the right place, at the right time, *and* at the lowest

possible cost. Its over-all purpose is to get maximum effectiveness from the company's investment in equipment, material, plants, and personnel.

Perhaps it's simpler to visualize production control through a simple analogy: Just think of your wife as she prepares Sunday dinner. The meal consists of a number of dishes, each requiring its own preparation and each its own specific cooking time. Yet your wife manages to put them all on the table at the right time, piping hot.

How does she do it? By using her knowledge of preparing and cooking food (the various operations) to plan what to buy and what to cook (routing), then to decide when to start preparing each dish (scheduling), then to start cooking (dispatching), and later to taste each dish (follow-up check to assure acceptability). Finally, the complete meal (the product) can be served to the family (released to the shipping dock).

How it works

That, in brief, is how a production-planning-and-control department works. The work is done through four essential kinds of operations:

1. *Routing*—mapping the product's progress through the plant.
2. *Scheduling*—timing all operations.
3. *Dispatching*—releasing material and product, as needed.
4. *Follow-up*—feeding back information and checking on results.

If we understand exactly how the production-control department does this, we may also see how it can help a supervisor in his work. Therefore, let's look at each of these four functions in greater detail.

Routing—Phase 1

The first and basic step in any production operation is routing. It begins with management's decision on this question: "Should we make or buy the product and its various components?"

Assume for a moment that your company is planning to turn out a new product. Can all the operations be completed in the most efficient manner within your factory? Will present equipment fill initial production—or must you order new machinery? If you decide to buy, will the size of the anticipated output justify the capital investment?

If the answers to some of these questions are "no," it may be smart to farm out, or subcontract, portions of the job. If all the answers are yes, the company is ready to consider the second phase of routing: determining exactly how the product, or its various parts, will proceed through manufacturing.

Routing—Phase 2

This phase starts in the preparatory department, where raw material is waiting and the initial work will be performed. Later opera-

tions must all be routed in logical sequence. In the women's garment industry, for example, cuffs are usually attached to sleeves before the sleeves are attached to jackets. For each operation, the routing plan must also show what equipment and method are to be used.

In a flexible department or plant, the layout can often be changed to fit production. Garment fabricators often arrange sewing machines in an order that matches the sequence of sewing operations, step by step.

The master routing sheet

A master routing sheet must also be prepared. While the precise form may differ from company to company, it will usually include the following:

1. Number and other identification of the order.
2. Symbol and identification of the part.
3. Number of pieces to be made.
4. Number of pieces in each lot.
5. Operation data.
   a) List of operations or parts.
   b) Machines to be used for each operation.
   c) Fixed sequence, if any, of operations.

Note that the machines to be used for each operation are listed. Also, operating time is calculated for each machine—including setup time needed when the machine is changed from one operation to another. The exact order will depend on the type of operation. The sequence must be carefully planned.

Scheduling

The next step in production control is scheduling: determining when the part or product is to be released for fabrication. In most cases, the due date to the customer has already been specified by company policy, a sales commitment, or customer request. But it's production control's job to specify when to start manufacturing the order.

This is done with the help of the master routing sheet. You establish the starting date by figuring overall production time, then counting back from the due date.

Scheduling sometimes requires machine-load charts as well. These charts project for weeks ahead how certain equipment, machine centers, or departments will be loaded against capacity; this permits closer control of work scheduling.

Scheduling helps the sales department to give out accurate completion dates or to estimate the company's capacity to accept more orders. And this, in turn, helps to cut down carloads and slack periods in manufacturing.

Nevertheless, some leeway must be allowed for rush orders and other unpredictable circumstances. Scheduling must always be flexible, and the production-control department must stay on its toes to keep it that way.

Dispatching

Up to this point, all production control has been on paper. But the next stage—dispatching—requires

physical activity: Once the starting date is set, dispatchers must arrange for all materials, tools, jigs, and fixtures needed in the manufacturing process.

Thus, they must make sure that the material from stores arrives in time for each stage of the operation. They must issue job orders that authorize the respective operations, so that operations can be coordinated. They must also check up on the product's moving from operation to operation according to the routing plan.

The dispatching section thus performs the paperwork on each product part within the manufacturing area. It records items like the beginning and completion time of each job, actual working time of machines, and the idle time of both machines and operators (so that future jobs can be scheduled still more accurately).

The Four Elements of Production Control

1. **Routing**—mapping the product's progress through the plant
2. **Scheduling**—timing all operations
3. **Dispatching**—releasing material and product, as needed
4. **Follow-up**—feeding back information and checking results

In short, then, a dispatcher is the production-control department's representative in the manufacturing department. His assignment is to assure a smooth production flow by seeing that schedules are fulfilled—and fulfilled properly.

Follow-up

The next and final operation of the production-control department is also one of the most important: follow-up.

Follow-up is defined as reporting back; it is the closing of the loop of control. It is applied to routing, scheduling, dispatching—all aspects of production control.

A control system obviously works best when there is a chance to take care of exceptions as they occur—in other words, to make corrections as they are needed. This is usually done by expediters—people who "walk" a job through the plant. But if many expediters are required to "father" a job, then over-all production control is probably breaking down: Routes are not being followed as expected; schedules aren't being met.

Thus, the ratio of the number of expediters to the total number of production-control people is one criterion for measuring the efficiency of the production-control department. It stands to reason: The better the production control, the fewer the people needed to expedite it.

Since the entire system of any company's production control is maintained and operated by people,

however, there is always room for human error. Here is some of the information needed for follow-up (much of this, of course, comes from supervisors).

Facts for follow-up

1. *Key personnel* working at a higher or lower rate of production than scheduled.
2. *Inspection reject rate* that is higher or lower than expected. (The lower rate is important, too, because if rejects are low, this means that fewer pieces must be produced to fill the order.)
3. *High absenteeism* in key operations.
4. *Equipment breakdown.*
5. *Production bottlenecks.*
6. *Completion dates* on jobs, as a check on the accuracy of scheduling.
7. *Routing and dispatching* results, again as an accuracy check.
8. *Dates of movement* from one operation to the next.

The specific follow-up procedure depends, of course, upon the speed and accuracy required for each operation and each job, and, of course, on company policy. Sometimes, follow-up reporting is conducted by telephone. A more efficient technique, however, would be a written follow-up—for instance, on teletype. This provides an accurate record of the original information and also eliminates the need for assigning a person to stand by a telephone to receive reports.

We have covered the basic ways by which a production-control department can actually control production. The question now is: How does production control help the line supervisor?

The line supervisor's job

Before answering, let's take a quick look at the line supervisor's job. He is responsible for directing employees in the manufacture of the product. Efficiency requires that his maximum effort be spent on this primary function—not on paperwork.

One of the main problems for line supervisors, then, is *how to reduce the time spent on activities other than supervising.*

Consider the following activities of an average foreman. (This list might, of course, be much longer in some companies.)

1. Assigning work.
2. Supervising work.
3. Scheduling operations necessary for each job.
4. Checking shortages.
5. Expediting orders through the department.
6. Filling out reports.
7. Administering labor relations.
8. Conducting preventive maintenance.
9. Checking broken lots.

Let's assume that this is an average plant and that the list is a valid sample of a foreman's work load. If the foreman could eliminate nonsupervisory items, he could reduce

his over-all work load. This, in turn, would allow more time for his primary role—direct supervisory activity.

This list reveals some obvious time savers: Functions 3, 4, and 5 are also performed by the production-control department. Suppose that, by cooperating closely with that department, the foreman tries to reduce this activity in his own schedule. Can it be done? It certainly can!

How production control helps

Here, step by step, is how production control can relieve the foreman or supervisor:

- *Scheduling operations for each job.* Production control decides which operations will be performed—and at what time—on the various orders coming into the plant. For one thing, this scheduling keeps too many jobs from piling up at once in any one department. Also, it allows the foreman to plan his department's work in advance.
- *Checking on shortages.* The dispatching group, before they release any job for manufacture, will insure that there is enough material on hand for *all* operations. The routing group will make sure that the scrap factor is included when they decide how many pieces to produce.
- *Preventive maintenance.* The scheduling group can institute a preventive-maintenance program in cooperation with the company's maintenance department. Thus, machines slated for specific operations are checked in advance and down time from breakdowns is minimized. The need for overhaul or repairs can be predicted, and machines can be repaired during off hours. The foreman will thus have few, if any, maintenance problems beyond those that are caused by accident.
- *Checking on broken lots.* One of the great time wasters in manufacturing, of course, is putting a job through in broken lots. It means extra setup time, extra instructions, extra supervision, and, often, extra difficulties. Through its routing and scheduling groups, production control can make sure that all jobs throughout the plant are

Give the "Inside Story"

The supervisor can help the production-control group by giving them facts that he is in the best position to know:

1. The "best method"—for the department—of performing an operation.
2. The cheapest setup methods for the job.
3. The interrelationship of machines in the department.
4. What machines are down for repair.
5. Idle time within the department, regardless of cause.

processed in the lot size quoted in the price. This not only makes the foreman's job easier; it also holds costs to the intended level.

It won't work without the supervisor

Production control can, then, give important help to the supervisor. But the effectiveness of this help, and, in fact, the effectiveness of production control in general, depend on the supervisor's understanding and cooperation.

Routing, scheduling, and dispatching are useless unless they are based on facts—and the facts can change rapidly. The most important help a foreman can give the production-control men is to report promptly changes that occur within his department.

Relaying the facts

Here are some facts that are needed:

1. *Make available the "best method" of performing an operation.* The supervisor has an intimate, day-to-day knowledge of the way operations are being performed. He is probably the first man to know when a change in method is necessary, from the point of view of either material costs or labor costs. He should submit this proposed method change to the standards department, which will then relay it to the production-control department in the form of a changed cost standard. Only through such cooperation between the supervisor and the staff departments is it possible to achieve maximum efficiency in the department—and, subsequently, in the entire plant. This is *always* advantageous. (If the change has been suggested by an operator, the operator should, of course, get credit for it.)

2. *Help to develop the cheapest setup methods.* The line foreman, via his setup men and production workers, has inside information on his particular machines. By experimenting, the foreman and his subordinates can develop the best setup method commensurate with cost and material. Again, this knowledge should be relayed to the standards department and, from there, to production control.

3. *Show the interrelationship of machines.* The line foreman is one of the very few people in managerial ranks who have a thorough knowledge of what all the machines in his department will do. For example, if he has drill presses and punch presses, he knows the full range of each—and he knows the many jobs that can be done equally well on either type of press. This can make a big difference during a period when, say, the drill presses are overloaded and a punch press is idle. Sometimes, people in the production-control department don't have this familiarity with the equipment; they would welcome the information.

How Production Control Can Help You

By cooperating closely with the production-control department, the supervisor can eliminate some of the paperwork and nonsupervisory work from his crowded schedule. The production-control department can help by—

Scheduling operations from each job (which also helps the foreman in his planning)

Checking on shortages, so there is always enough material on hand

Conducting preventive maintenance, to minimize down time

Checking on broken lots, so that jobs are processed without wasted time

4. *Feed back information about machines down for repair.* Whatever the reason for a machine breakdown—and there are many—the breakdown is usually unexpected. Therefore, if a breakdown occurs, it should be reported, not only to the maintenance department, but also to the production-control department. They will then be able to reschedule the particular job and operation.

If it's possible to predict how long the machine will be down, this also should be reported. If it is, production control can omit the specific machine from its scheduling until repairs have been completed and the machine is again ready for use.

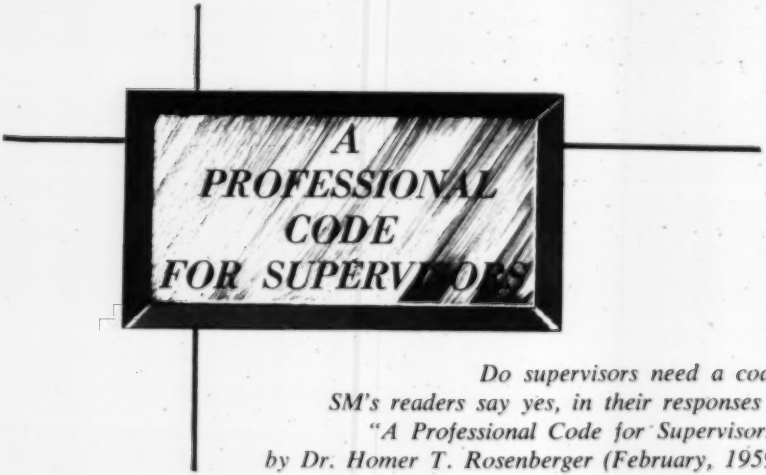
5. *Report idle time within the department*, regardless of its cause. In scheduling, production-control departments usually assume a shift of eight standard hours and plan work loads accordingly. Any variation from this schedule will sooner or later cause a bottleneck. And, naturally, it's best to cope with bottlenecks *before* they occur. Thus, the idle time is an important clue that something is wrong somewhere. Alerted to it, production control can find the problem and solve it before it spreads and seriously affects output.

Production control is a friend, not a critic, of the supervisor, and is working toward the same goal: to turn out the product as simply and efficiently as possible. ♦

OBSERVE the postage stamp! Its usefulness depends upon its ability to stick to one thing until it gets there.

—JOSH BILLINGS

SM Discussion and Comment:



Do supervisors need a code? SM's readers say yes, in their responses to "A Professional Code for Supervisors," by Dr. Homer T. Rosenberger (February, 1959).

In a Nutshell

TO THE EDITOR:

Certainly a supervisor needs a code, whether you call it a professional code or not.

Here is my idea about supervision. It doesn't encompass all the aspects of supervision that Dr. Rosenberger's code does, but as far as the human aspects of supervision are concerned, I think it covers the waterfront:

"A supervisor sees that his subordinates' rights and privileges are observed and respected, and he also sees that subordinates discharge and fulfill their responsibilities and obligations."

A supervisor who does these things will be treating the employees and the company fairly.

—EARLE F. DODDS
Personnel Officer
Division of Chemical Operations
Tennessee Valley Authority

Respect, Courage, Loyalty

TO THE EDITOR:

Dr. Rosenberger's February article in SUPERVISORY MANAGEMENT was excellent and stimulated the following thoughts on this subject.

From my observations, the development of a deep respect for individual dignity, of personal courage, and of a sense of loyalty is of great importance to a supervisor if he is to be a respected and reliable member of management.

Respect for individual dignity manifests itself in the supervisor's every contact with his employees. It is especially important when it is applied to the way an employee is criticized. The supervisor should consider an employee's errors as opportunities to teach improved methods, by sharing experiences and knowledge with the employee. Criticism should not be used as an opportunity to humiliate.

Personal courage is a must if the supervisor is to be able to accept *full* responsibility for all his own actions and his employees' actions on the job. The supervisor's personal courage enables him to avoid using an erring employee as a scapegoat with higher management. It enables the supervisor to realize that employees' errors result from a failure to carry out one or more of the following responsibilities of supervision:

1. Proper selection of personnel
2. Adequate training
3. Intelligent supervision

On the other hand, the supervisor must also have the courage to give credit for jobs well done by encouraging and praising the employee and by passing the good word along to higher management when it is appropriate.

Personal courage also enables the supervisor to base all decisions on facts which have been intelligently interpreted and to make decisions which are logically, ethically, and morally sound.

Loyalty is on the other side of the "courage" coin. A supervisor must have the courage to state his convictions to his superior and to support them factually and logically. However, when a superior's final decision is made, whether or not it is in harmony with the supervisor's point of view, the supervisor should accept his superior's position as his own as long as he remains under the superior's jurisdiction. This application of loyalty is especially important when a superior's decision may be contrary to the supervisor's deep-seated convictions.

—NIELS T. ANDERSEN
Ford Motor Company
Ford International Division

A Foreman's Ten Commandments

TO THE EDITOR:

For what it is worth, I am enclosing a set of "Ten Commandments" for foremen, which I have developed. I know many such commandments have been written, but none that cover the field of employee relations and a foreman's behavior.

Thou shalt be humane—respecting your superiors, equals, and employees by being calm, courteous, friendly, helpful, kind, and understanding.

Thou shalt keep an open mind—keeping your door as well as your mind open, available, and receptive to give time to obtain facts, opinion, or suggestion; to properly evaluate the problem and to give a prompt, decisive reply.

Thou shalt not operate alone—Ignoring the suggestions, planning, or advice of others limits the scope of your operations and reduces your effectiveness on the management team.

Thou shalt know and understand why ye give a full day's work for adequate compensation—creating the desire and setting the example for fellow employees to do the same.

Thou shalt be acquainted with fields of endeavor other than thine own—permitting yourself to be conversant with fellow employees on many subjects and to give advice or assistance willingly without being an oracle.

Thou shalt be willing to train and assist fellow employees—Relieving yourself of details increases your fellow employees' knowledge and strengthens your organization, but requires you to check and verify the results of your plans and operations.

Thou shalt not order fellow employees around—creating doubts about your knowledge, fair consideration, and response to the problem at hand. Qualify a proper request with an adequate explanation.

Thou shalt not "pass the buck"—Refusing to assume your proper responsibilities is a sure way to lower fellow employees' respect for you and serves only to undermine your authority and responsibility.

Thou shalt not be evasive—Replying without conviction should be beneath your dignity, for you should take your time, and be temperate but never abrupt in deliberating, talking, or making decisions.

Thou shalt be clean—maintaining a clean, healthful, moral, safe, and sane work area.

—JAMES T. HUTSON
Personnel Director
The Cleveland Clinic Foundation

Transcription Supervisors' Code

TO THE EDITOR:

Dr. Rosenberger's article, *A Professional Code for Supervisors*, has created much interest among members of our Association.

It is particularly gratifying to note that his code includes all the essentials to be found in the following "Supervisor's Code of Ethics," authored in 1941 by one of our members, Madeline C. Gorman, of the American Cyanamid Company, and adopted by membership vote as the code of ethics for the Transcription Supervisors' Association of New York.

We consider the development of our code of ethics a major contribution to our membership, in that it defines the goals and course of action of supervisors who are responsible for the success of a given operation through the efforts, development, and well-being of the group of people who must accomplish it.

Supervisor's Code of Ethics
(Abridged form)

1. Loyalty to our organization.
2. Loyalty to our staff.
3. Interpretation of the policies of

our organization in the proper spirit, and follow-through on their observance.

4. Safeguarding confidential information.

5. Willingness to assume responsibilities.

6. Speaking and acting when it is our duty to do so, without bias or distortion.

7. Diligence and exemplariness in the performance of tasks.

8. Maintaining proper working conditions in neat and orderly offices; and, in turn, requiring full time and high standards of service from those under our charge.

9. Honesty and freedom from discrimination in our judgment and treatment of our subordinates.

10. Making proper use of materials and equipment assigned to our department.*

—HELEN LESKO
Public Relations Chairman
Transcription Supervisors' Association of New York

Drawing by Bill Tara. From "Personnel Management in Small Companies." Institute of Industrial Relations, University of California.

On the Basis of Experience

TO THE EDITOR:

May I submit the following, from my "Foreman's Ethics" booklet, compiled over 12 years of supervision:

1. The foreman should recognize that every man above, beside, or below has an inherent desire to do good work and to be a useful and respected citizen. Until he has considered every possible motive, he should not assume that any man wants to do anything less than his best.

2. The foreman should keep an open mind on all subjects, and strive to maintain a broad and balanced outlook. He should always be willing to recognize merit in another's ideas.

3. The foreman should deal fairly with all his associates in the company. Being in an important position, he should assume responsibility for his own mistakes and refrain

* A copy of the complete code is available on request from the Transcription Supervisors' Association of New York, in care of Miss Helen Lesko, Union Carbide Corporation, 30 E. 42nd Street, New York 17, New York.

from shifting blame to other people.

4. The foreman should strive to understand the principles of business which make for the success or failure of industry. He should pass on to his men all the fundamentals of business principles so they can see for themselves their own relation to the general scheme.

5. The foreman should keep informed on the latest developments in equipment and processes. He should recommend or put into effect methods that will produce improved quality and lower costs for his products, and improve working conditions.

6. The foreman must feel that one phase of his profession is to help working people obtain maximum satisfaction from life.

7. The foreman should endeavor to earn, and carefully guard, a reputation for good moral character, good citizenship, and common honesty; and he should support and promote all the uplifting influences of the community.

—HARRY A. WOZNIAK
General Foreman
Bucyrus-Erie Company

Wanted: More and Better Managers

AMERICA FACES a managerial crisis in the 1970's, according to Charles W. V. Meares, vice-president in charge of personnel, New York Life Insurance Company. Speaking at the Midwinter Personnel Conference of the American Management Association in February, Mr. Meares said that the American economy would need 30 per cent more managers in the labor force in 1970 than today.

The new managers will be needed "to operate new industries, such as the atomic-energy industry," Mr. Meares explained. "And we will need more managers to expand our present industrial capacity. The character of industrial change also increases our requirements. Decentralization, for example, will require additional managers. We may require a greater number of managers to operate American businesses abroad."

"But that is not all," he added. "We shall need not only *more* but *better* managers. They will require more education and better training." The managers of tomorrow will have to meet problems of automation which cannot be solved by electronic knowledge alone. Linguistic skills will be needed to sell American products all over the world; the problems of the seventies will call for social, political, economic, and moral judgments "well beyond marketplace economics."

Mr. Meares recommended: 1) *better education,* so that industry can train managers, not start by teaching them what they should have learned at school; 2) *accelerated management development,* based on individual needs and qualifications; 3) *increased business support of basic research* on human behavior in business.

MAKE THE MOST OF YOUR MANPOWER

Part 2

TRAINING

Build an effective work group—and learn as you train.

By Frank A. Busse

Director of Personnel, Quality Bakers of America Cooperative, Inc.

LAST MONTH, we talked about selection of personnel. It's not hard to figure out that this selection process represents a heavy investment—in both time and money. Yet the cost is justified if we get an employee likely to stay on the job—and well qualified to perform it. The best insurance to protect the investment is proper training.

Whether the new employee will be taught to operate a lathe, flip a switch, press a lever, or type invoices, certain training techniques, philosophies, and principles are universal.

Training is teaching. It is a process that goes on between two or more people and depends on the cooperation of both. Remember the truism: If the employee hasn't learned, the instructor hasn't taught. The goal in training is to pass on not just information, but a new way of doing things. As John Ruskin said:

"Education does not mean teaching people what they do not know. It means teaching them to behave as they do not behave. . . . It is a painful, continual, and difficult work to be done by kindness, by watching, by warning, by precept, and by praise, but above all—by example."

Those last two words are important, for the supervisor does his most permanent teaching by example.

A new employee particularly is open to the example set by his superior. In teaching a person the technical part of a job, you cannot avoid teaching him work habits and attitudes at the same time. If your teaching habits are sloppy, his performance is likely to be no better; if your teaching attitude is poor, he will accept that attitude as par for the course.

Induction

The first phase of training—induction—is designed to convert the recruit into an employee. In this process, the supervisor tries to get across certain information—and tries also to reduce any fears or blocks about the new job, and to make the employee feel at home.

The first step of induction is to welcome the employee, to call him by name, and to introduce him to others in the group. He should be told at once to whom he is responsible, who else works in the same group, what the main job of the department is. He should be encouraged to ask questions about anything that isn't clear.

The new worker needs to be physically oriented; he wants to know right away where he is to work—even if it's only a temporary location. He needs to know the location of the time clock, if any, the locker and washroom, the lunchroom. He wants to know when pay day is and on what basis he will be paid. Some of this may have been explained to him when he was hired, but it's advisable to make sure he knows.

The new employee, of course, wants to know what his main duties will be, who his foreman or lead man is, to whom he can turn for help. If there are special departmental rules or safety rules, he should be instructed now—not after he has inadvertently broken one. He wants to know also, to a greater or lesser degree, the over-all company picture. If his job involves judgment, he must learn at least the facets of company policy that he needs to consider in making decisions.

A positive approach

Above all, the employee needs a positive approach on the part of his supervisor. He may have doubts or worries about this new job. But if you hadn't thought he could do the job, you wouldn't have hired him. Let him see and know, therefore, that you expect him to succeed. Not only the job, but the company and the entire field of operations, may be new to him. Tell him what you know about the importance of his work.

Learning Never Stops

The *capacity* to learn is the most distinguishing fact about human nature. The first 15 to 20 years of a person's life are devoted largely to learning; to gaining ways of moving, perceiving, thinking, and feeling necessary for the business of an adult human being.

The process of learning is a central feature of human life. Every act of manual skill displayed, every item of information possessed, every ideal and prejudice with which the day's events are met are the result of learning. No attempt to understand human nature can be successful unless the principles of learning or habit formation are taken into serious account. Man is never through learning.

—ALFRED P. SLOAN

Tell him also about the possibilities of development on the job.

Probably you'll be seeing the employee every day. If not, make it a point to follow up at the end of the week to see how he's doing.

On-the-job training

One of the most frequent mistakes made in industry is to assume that a person doesn't need training. You hire a lathe operator, or a typist, or a truck driver. Certainly, if you've done an adequate job of selection, this person can operate a lathe, or a typewriter, or a truck. But this by no means assures you that he knows how to do the particular job you hired him for, in the way you want it done.

Who should train?

The supervisor is usually the best person to do the training. If he must delegate this important job, he should ask himself these questions about the person to whom he delegates:

1. Does this person have the ability to teach? That is, does he know the basic steps of instruction; can he express himself clearly; does he have the friendliness and patience needed?

2. Does he know the job well enough to teach it?

3. Is he interested in teaching the job?

Unless the answer to all three questions is yes, find another teacher, or do the training job yourself.

Even a supervisor who has an assistant well qualified to do the training job should still take some part in it himself. The first days of training give the supervisor an unparalleled opportunity to get to know the new man and to establish a good relationship with him.

What do you teach?

The trainer should, of course, know the job thoroughly. Often, in fact, he knows more about it than he needs to pass on during the first training period.

The new employee must know how to do his job and do it well. He usually wants to know also the purpose of his job: why it is needed, how it fits into the over-all operations of the company. But he does not need or want to know a thousand irrelevant details over which he has no jurisdiction.

A nine-year old once said in a book report: "It told me more about penguins than I cared to know." If the trainee is asked to absorb too many irrelevant details, he may become completely bewildered.

One way to get across a maximum of training with a minimum of confusion is to organize the presentation. Break down the job, listing the principal steps and the main points to be learned about each step. Then consider how much of this the learner can absorb in one lesson.

Steps in Training

1. Induction—general orientation to the company, the department, the work group, the job
2. On-the-job training
   A. Prepare the employee
   B. Present the job
   C. Try out the employee
   D. Follow through
3. Follow-up with continuous training

Not only does a job breakdown make training easier for the learner, but it also gives the supervisor a way of checking to make sure he has covered all essential points.

Where do you train?

More often than not, training is done at the workplace. Before starting instruction, the supervisor should check to make sure that the workplace is properly arranged, that all necessary tools and materials are ready. The learner should be placed where he can do the work as he will do it after the training period.

The four steps of training

This effective four-step job instruction plan was developed during World War II:

1. Prepare the employee
2. Present the job
3. Try out the employee
4. Follow through

1. *Preparation for training* consists of putting the employee at his ease, arousing his interest in the job, finding out how much he already knows that will help him understand this operation.

A learner who feels nervous or has important unanswered questions cannot and will not be able to concentrate on what the supervisor is trying to teach him. That's why the induction process should *precede* specific job training.

2. *Present the job.* You have already made a job breakdown, covering the main steps. Now you present these to the learner, one step at a time. This presentation is made by

SEE ALSO . . .

For some sidelights on training, you may want to read the following articles that have appeared recently in SUPERVISORY MANAGEMENT:

Job Instruction: Overcoming the Barriers. January, 1958.
Understanding the Individual Learner. April, 1958.
Management Trainees: Problem or Challenge? July, 1958.
Training: It's On-the-Job Results that Count! August, 1958.
Don't Tell Them . . . Show Them! October, 1958.
The First Day Makes the Difference. January, 1959.

a combination of *telling* what is to be done, *showing* how it is done, and *determining* by questions and performance whether or not the learner has understood.

Until Step A is mastered, there's no use in rushing the learner to Step B. Individuals vary tremendously in their speed of learning; but whatever their capacities, most people do better with a trainer who is cooperative and relaxed.

3. *Try out the employee.* Have him run through the entire job himself, correcting his errors, if any, as he makes them. Continue until he has shown you everything you taught him and until you are satisfied he can do the job.

4. *Follow through.* Put the man on his own, but come back at intervals to make sure he is following correct procedure and to answer any questions that come up in the work. If correction is needed, it should be given in a friendly manner.

Follow-through is continued until the worker can do the job with only normal supervision.

If these four steps are followed, any reasonably intelligent and interested new worker will quickly become a well-trained employee.

Training for development

There's usually a scarcity of highly skilled workers. One way to get them, when you need them, is to bid against the market; another way is to "grow your own" by training people on your staff. You'll still have to meet going rates, but you will at least have people you know and can rely on.

Part of this training for development consists of teaching specific skills and techniques; this follows the four steps of preparation, instruction, try-out, and follow-through.

But, in training for a higher-level job, you must also develop the employee's facility for judgment and planning. This doesn't mean teach-

ing people how to think; most people already have far more thinking ability than they use. The problem is to get them to *apply this ability to the needs of the job.*

You can give an employee exercise in judgment and planning by the way in which you give him instructions.

At first, tell him exactly what to do and how to do it. Gradually, as he shows ability, you can taper off to the point where you give only general instructions: State the job to be done and leave the details to the employee. Still later, if you're lucky, you will be able to state the problem and let the employee figure out what to do.

If you're training the man to be your assistant or understudy, pay some attention to his personal qualifications as well as to his job skills. He can't double for you unless he has leadership, judgment, and a well-developed sense of responsibility.

Training should not be cut off abruptly at the end of a specific job-instruction program. Too many employees, after the indoctrination period, are left to "die on the vine" without further help or attention from the supervisor.

A continuing process

A good supervisor goes on training all the time. Supervision in its larger sense is training; and it has been well said that the trainer learns even more than the people he trains. For every employee, including the supervisor, training is a continuous process of development. ♦

Part 3, which concludes this series, will discuss motivation, the third leg of the "manpower tripod."

All in the Same Boat

WHEN YOU'RE FRUSTRATED, don't feel you're a special victim. If you could take a "frustration survey" you'd find:

Everybody puts time and effort into work that turns out to be useless; runs into several snags on any undertaking; finds his efforts undone by somebody else; gets further delayed when he is already late.

Everybody can't find some indispensable tool or piece of paper when he's all ready to start a project; does a good job for which someone else is rewarded; loses out on something that was almost in the bag.

Everybody finds an apparently simple task difficult to do; often fails to get what he wants; has his best-laid plans fall apart; now and then finds everything just too much for him.

—*Vision*

Industry Puts Explosions to Work

THE NEW ART of explosive metal forming is attracting a growing number of users. Explosive forming shapes metal by exerting sudden explosive pressures on it so great that they are believed to turn the metal into a gluey liquid for a few millionths of a second—enough time to form it easily against a die. Scientists say that explosive chemicals can produce up to 7,000,000 pounds of pressure per square inch, compared with a maximum of about 400,000 pounds for a giant press that may stand nine stories high and weigh close to 11,000 tons.

Aircraft and missile makers are finding the process especially valuable for shaping tough, heat-resistant alloys designed for super-speed travel. Explosive forming also appeals to cost-conscious manufacturers who must shape a limited number of vital parts, but can't afford to invest $50,000 or more in specialized tools that would lie idle most of the time.

—GORDON MCKIBBEN
in *The Wall Street Journal*

"Unless you're going 'beep, beep,' I think I'm picking up a satellite."

Must You Be Adjusted?

By Wilbur M. McFeely

Vice-President and Director of Industrial Relations
Riegel Paper Corporation and Riegel Textile Corporation

The person who's out of step may be creating a new rhythm.

AT A RECENT MEETING on supervisory development, much of the discussion centered around the ability of an individual to adjust to situations. A person was considered to be good timber for promotion if he had demonstrated his ability to "get along"; that is, to adjust himself to his working environment. He was rated a poor risk if he seemed to lack this ability.

All this may be true. But there is great danger in using the word "adjustment" loosely. It is a word in wide current use that needs to be examined closely and defined carefully.

Adjustment—or maturity?

Adjustment is not a synonym for maturity. A mature person is not one who has reached a certain level of development and then stopped. He is a person who has continued to

develop new insights and powers. A mature person, for example, is not one who has merely learned a lot of facts. He is one who continues to acquire new knowledge and, above all, who becomes increasingly able to use it wisely.

A mature person is not one who has settled down comfortably with a circle of friends or fellow workers and conveniently ignores all others. He is not one who attains a status of protected respectability by belonging to the "right" church, club, or social group but skillfully avoids being disturbed by the crying needs of other groups in his community. Such people may be described as "well adjusted" if adjustment is defined as harmonious conformity to their own group's standards. They may be perfectly at home with their bundle of prejudices, attitudes, and beliefs.

A better test

Individuals cannot be classified and judged wholly on their capacity for adjustment. A better test is their record for original, constructive achievement. This is a better criterion for identifying the maturing individual. It is a better measure of a man's potentiality for advancement.

Yet, if we use the word in its popular context, such men may be poorly "adjusted." Certainly, Jesus was poorly adjusted to the society in which he lived and moved, but he gave the world such mature insights into human nature that we have not yet grasped their full significance. The founding fathers of America were poorly adjusted to the society of their day; for this very reason, they gave birth to new concepts of government. Most of the great scientists were unadjusted to the limited thinking of their contemporaries; consequently, they pushed out into new horizons of discovery.

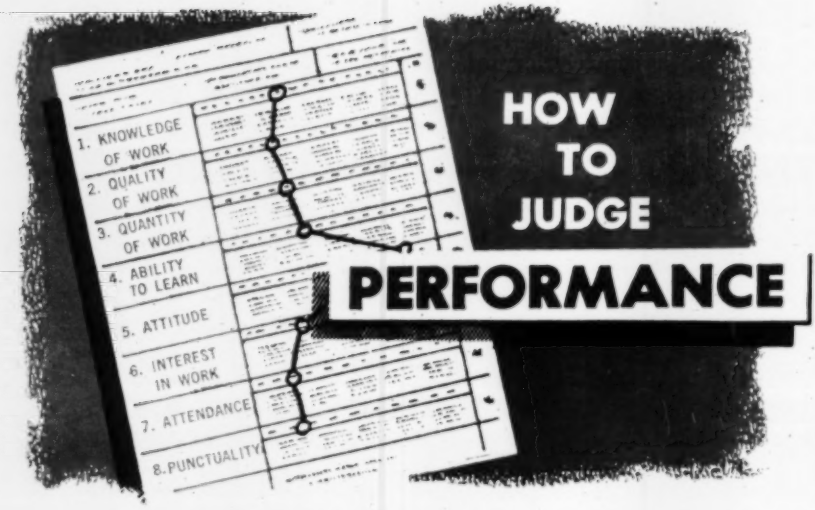
They, and others like them, were psychological adults. They were looked upon with deep distrust by people who were well adjusted to an existing situation but were perfectly content to stop growing.

The flash of inspiration

If a person is both immature and unadjusted, he needs help and is a poor risk for management responsibility. If he is unadjusted but capable of constructive, original achievement, he is worth careful consideration and nurturing.

The capacity to make a mature adjustment to life's successes and failures is important. But the capacity to adjust will not of itself produce the flash of inspiration nor the continuous quest for the new and better upon which success and progress depend. ♦

This article has been adapted, with permission, from Wilbur M. McFeely's new book, *On Being the Boss*. © 1959, by Association Press.



HOW TO JUDGE PERFORMANCE

Here's how to take the guesswork out of employee evaluations.

IN ALMOST EVERY SITUATION that involves more than one person, some sort of evaluation takes place. If a group of people bowl together regularly, for example, it doesn't take long before each person has rated his own bowling ability against that of the rest of the group. In the work situation, the same is true. We're constantly appraising the men who work around us. Thus the question is not *whether* but *how* we rate employee job performance.

Formal employee evaluation, or merit rating, attempts to rate employees in the most accurate way possible. It substitutes carefully considered judgment for off-the-cuff observation.

Since formal evaluation is the supervisor's responsibility, it's important for him to know what it is and how it works.

What is formal employee evaluation?

Most people make hasty observations about the things and people around them. Usually, some bias and prejudice affect their final judgment. Often, judgment is shaded by carry-overs from other activities.

Formal evaluation attempts to reduce the amount of guesswork, bias, prejudice, and previous experience that might cause a faulty rating. It attempts to help the rater make more accurate judgments through studied observation. It makes the rater think about specific traits

rather than generalities. It offers a systematic and organized procedure for an important function that should not be left to chance. It provides a method that can do much to discredit charges of favoritism or unfairness that are often the sour grapes of the grapevine.

There are three general methods used in formal employee evaluation. Each has advantages and disadvantages. Companies usually decide which method to use on the basis of the number of employees to be evaluated, the types of functions the employees carry out, the amount of time available to carry out the evaluations, the amount of time available to train evaluators, the funds available for the evaluation program, and the use of the results of evaluation. Many companies have developed evaluating systems with added refinements above and beyond the three general methods; still, most methods can be categorized as: rating scales, ranking of employees, or check lists.

Rating scales

For rating scales, a printed form is used. Various traits, or performance factors, are listed down the left-hand side of the page. The list usually includes: personality, neatness, industry, initiative, accuracy, quality of work, quantity of work, disposition, cooperativeness, judgment, ability to lead and direct others. Each company will list what it feels is important in the work situation. Hence, no one list of performance factors will suit all companies. From each trait, a horizontal printed line runs to the right across the page. There are usually markings along the horizontal line that guide the rater. These can be numerical, descriptive, or letter grades. Numerical markings usually range from 0 to 100; descriptive markings usually designate "below average," "average," and "above average"; letter-grade markings usually appear as *A*, *B*, *C*, *D*, and *E*.

A separate rating blank is used for each employee. The rater simply makes check marks along the horizontal lines to the right of the trait that he is evaluating.

The rating is against a standard, and is not a comparison of one employee against others carrying out similar functions. The simplicity of the rating scale has made it the most widely used method in industry.

Ranking employees

The ranking method compares the relative performance of one member of a group against all other members of the group. It can be used to rank an employee's over-all performance or specific parts of his

From *Handbook for Supervisors*, by P. Ecker, J. MacRae, V. Ouellette, and C. Telford. © 1959, by Prentice-Hall, Inc., Englewood Cliffs, N. J. Published by Prentice-Hall.

performance. There are several ways of making comparisons: rank order, forced distribution, and paired comparisons.

The rank-order method

The rank-order method ranks employees from the best man on down to the poorest, on part or all of the job. The rater arranges in order a set of cards with the names of all the men being ranked.

Forced distribution

The forced-distribution method forces the rater to place all the men he is evaluating into predetermined percentages of distribution. Thus, 10 per cent of the men must be ranked "superior," 20 per cent "above average," 40 per cent "average," 20 per cent "below average," and 10 per cent "poor." The rater usually starts with a printed form for each man he must rate. If his percentage distribution does not match the predetermined pattern, he reworks the individual forms until it does.

Paired comparisons

Paired comparisons provide for direct comparisons of employees. The rater is given cards with the names of two employees on each card. Enough cards are provided so that each employee is rated against every other employee in the group. The rater marks on each card the name of the man he rates higher on over-all performance. He then counts the total number of times each name has been checked. The name with the most checks ranks highest; the name with the fewest checks ranks lowest; the names between the highest and the lowest are ranked in order of the number of checks.

The obvious weakness of ranking systems is that they are time consuming for the rater. Thus, ranking is not usually used when a large number of men is to be evaluated.

Check lists

Check lists differ from the rating scale, which uses a norm or standard, and from the ranking of employees, which uses a direct comparison of individual employees. Check lists attempt to define behavior or traits that apply *to a job* the individual is doing. There is usually a list of statements describing behavior that indicates varying degrees of job performance. Each of these statements is assigned a numerical value, usually from zero to ten. A zero statement implies poor performance; ten implies good performance; five implies average performance. Thus, if an important trait of a particular job is "accuracy," the total list would include: "makes many errors" (zero), "average accuracy" (five), "seldom makes errors" (ten). There are usually ten to twenty job traits listed on the form.

When the rater finishes checking

the statements that best describe the behavior of the worker on the job, the numerical values are totaled, giving a score for all traits. This total represents the over-all performance of the individual in all behavior traits that apply to the particular job.

The main weakness of the checklist method compared to other rating methods is the length of time required to prepare a tailor-made list of statements that accurately describe behavior on each job. The number of jobs in most companies makes this method difficult or impossible.

Objective evaluation

The choice of a particular method of evaluation to be used in a company or a department should be made only after careful study. But whatever method is chosen, the supervisor must do a thorough and careful rating job. The best method cannot produce good results unless the raters believe in the idea of objective employee evaluation.

Records of performance—such as the work record, the production record, the attendance record—must also be considered in the individual's over-all rating.

The performance interview

Since every employee should know how he is doing on his job, the results of his evaluation should be presented to him, in an interview. The supervisor should carefully point out the employee's strengths and weaknesses. The main objective of the interview is to help the man to see for himself that he needs improvement in weak areas, and to help him work out a self-development program for overcoming these weaknesses. Too often, the performance interview is merely a praise session or a bawl-out, in which no suggestions are offered for improvement.

Three Basic Evaluation Methods

1. Rating scales (against a standard)
2. Ranking (comparing members of the group)
   a. Rank-order method
   b. Forced distribution
   c. Paired comparisons
3. Check lists (rating traits that apply to specific jobs)

It's a good idea, in preparing for the performance interview, to note specific, actual instances of good or poor job performance. If the employee asks a question or disagrees with your rating, you can give him concrete reasons for your evaluation. It's also a good idea to keep a running record of the work activities of all your men. These critical-incident evaluations can be done on a daily or weekly basis. All that is required is a brief note about a man's performance at a given task.

The ultimate objective of the interview is to secure agreement on the evaluation and to get the employee started on a plan of action for self-improvement.

One word of caution about the performance interview: Don't make any promises that can't be fulfilled, especially about promotion. It's usually better to stress attainable development goals. Usually these goals are for improvement in job performance. Sometimes they are directly related to personal skills necessary for a more responsible job. In either case, it's important that the employee see his problems and find solutions.

Since the performance interview plays such an important part in evaluation, you should give it your own top performance. Practice sessions with other supervisors will help; or you might get advice from trained interviewers.

Gaining acceptance

Critics of employee evaluation often point out that evaluation is not objective or valid, since no two raters could ever agree. This is partially true. All rating instruments *can* be challenged from the standpoint of validity and reliability. But these evaluation programs are the most accurate and objective means of evaluation that have been developed so far; certainly they are more valid than off-the-cuff opinions.

To gain acceptance of evaluation, every member of management must know its purpose—and its weaknesses. Management must be willing to discuss why evaluation is needed, how the results of evaluation are used, and what it will do for the individual employee. Good employee relationships in other areas will also help sell an evaluation program.

What it takes

Since employee evaluation is based on individual judgments, we must understand its strengths and weaknesses, and know what it takes to keep it running smoothly.

1. An evaluation program must have the wholehearted support of every member of management.

2. An evaluation program must have specific purposes. These should be fully understood by managers and subordinates.

3. An evaluation program must have more than just a rating system. Work histories, production records, attendance figures, and other objective measures must be combined with ratings.

4. Each supervisor should do everything he can to improve his skill in conducting performance interviews.

5. An evaluation program must be continuous and scheduled at regular intervals. If possible, the evaluation should precede salary merit increases by several months. In that way, the emphasis is taken off economic gain or penalty and is placed on improvement—which is, after all, the goal of employee evaluation. ♦

By E. G. Hutzley

Senior Safety Engineer, Campbell Soup Company

Ever figure out what you save by preventing an accident?

HAVE YOU EVER THOUGHT of the economic aspects of preventing accidents?

The relation of accidents and injuries to production costs is seldom fully appreciated. Almost every supervisor has some sort of opinion on this subject. And most of these opinions are—at least in part—misconceptions.

What is an accident?

First, let's pin down what an accident *is*. According to Webster, an accident is a happening without design. Most accidents are unfortunate. They differ from willful mischief or sabotage only because the accident is not planned or intended.

Unfortunately, most supervisors consider only injuries as accidents. But many accidents happen *without* personal injury. For example: If an employee loses control of a fork-lift truck which plunges into an elevator shaft, that is an accident. If the operator falls with the truck and is seriously injured, that is an injury, and so much the worse. But the point is that every industrial accident—major or minor, with or without injury—interferes with the job. It strikes at the very heart of a supervisor's chief responsibility by

interrupting the continuity of production—not to mention the human suffering it may entail.

Why the supervisor is responsible

Accidents are the greatest cause of upset schedules, delay, excessive costs, losses, and difficulties in human relations. That's the main reason that supervisors are held responsible for preventing accidents. Such responsibility is an asset, not a stumbling block. For accident prevention is a great common denominator between the supervisor and his subordinates. What could be a more favorable field for cooperation?

Actually, time invested in accident prevention pays tremendous dividends. More than nine out of ten of all accidents are the result of human failure to follow orders, procedures, or methods. All accidents or "near" accidents that receive the supervisor's prompt and close attention can be eventually eliminated by his refusal to accept them as a necessary evil.

The cost of manufacturing a product can be closely computed—*except for accidents.* These elements of loss remain unpredictable. Money losses from this source consist of direct costs, plus indirect costs that can be, and usually are, greater. Based on national averages, these "hidden" or "incidental" costs conservatively average over four times the direct costs of accidents.

Who pays?

Who pays? First, the *employer* pays direct accidental-injury costs in accordance with Workmen's Compensation laws, as well as all indirect uninsured costs. These all go into the cost of the product.

The *supervisor* pays in terms of operating inefficiency: shut-down machines, lost production skills of an injured employee, or damaged material or equipment. These interferences cause a quality drop, quantity reduction, work delay, and cost rise in his department.

On top of that, when an accident results in injury, the injured *employee* pays too, in suffering, reduced income, accumulation of bills, and possible permanent disability.

Every supervisor should make an honest estimate of all costs caused by accidents or injuries, within the scope of his supervision, to help him understand why stopping accidents of every type is important. It bears repeating: The many losses that result from accidents can be avoided by preventing accidents. Remember: *The accidents that do not happen are the only ones that cost nothing.*

How much?

The following examples, quoted with permission from Russell de Reamer's *Modern Safety Practices,* will give an idea of how accident costs should be figured.

"A commercial aircraft taxiing into a runway struck the tail cone of another aircraft with its wing tip.

SAFETY IS A STATE OF MIND

SAFETY, it has been said, is largely a state of mind. For, despite good working environment, safe equipment, effective mechanical safeguards, and standards of safe and efficient operation, accidents *do* happen on the job—and their frequency, in most cases, corresponds with the degree of safety-mindedness that has been instilled in the work group. To a large extent, then, accident prevention is a matter of communication. The operating manager's responsibility for accident prevention entails a responsibility to communicate to workers the critical importance of giving conscious thought to their own safety and that of their fellow workers.

—from *Effective Communication on the Job*
American Management Association

The total repair bill for both planes was $93.05—rather insignificant in a multimillion-dollar business. But one of the airline's safety-minded executives was not satisfied. . . . He decided to find out just how much the smashup had really cost.

"The answer he got may surprise many people. . . . Two flights were immediately canceled, with a revenue loss of $2,000. Two other trips had to be canceled later to balance equipment from Seattle to Los Angeles and from Seattle to San Francisco, at an estimated revenue loss of $6,000. The equipment damage involved two airplanes out of service for a total of 20 hours at an average of $550 an hour, or a total of $11,000. Thus, this one so-called minor accident, involving no injuries, cost $19,000—not $93.05.

"Here is another example: A machine operator slipped on an oily spot as he was running to extinguish a fire. At first glance, it looked as if his back injury would require one or two trips to the dispensary. But complications set in. Because of a permanent partial disability plus several weeks away from work, the injured employee received $10,300 in workmen's compensation payments. Hospital and doctor bills soared to $4,525. Other expenses amounted to $491.18. Thus, the total bill for extinguishing one small fire was over $15,000.

Far-reaching effects

"Every accident interferes with production, and anything that slows production and increases costs should be the concern of all supervisors. To ignore even minor accidents is like carrying water in a leaky pail.

"A high accident rate in any community would decrease the earning power of some, add to the number of handicapped and totally disabled, and leave some families without support, in turn increasing taxes and the costs of operating the

community welfare department and hospitals. Thus, the community-conscious company, the organization that is eager to justify its existence by contributing to the community welfare, would want to discharge its responsibility as a good neighbor by helping to reduce accidents on and off the job."

"The little things that count"

Any tendency to discount or ignore the "near," or "not-too-serious," accident is unfortunate. There are more than 30 little or near accidents for every single reportable accidental injury. Also, there are 300 relatively minor injuries for every very serious or fatal happening. Many little accidents combine to cause large losses in time, material, and manpower.

Little accidents or near accidents are little only because someone was lucky. The cause of a few minute's time lost, a slight damage, or a first-aid injury might just as easily have killed or seriously injured an employee, wrecked an expensive piece of equipment, or ruined several batches of a product! Even without injury, the damage, down time, emergency action, and shaken morale of an operator who has had a narrow escape will result in costs that can be charged nowhere but to the department in which the operator works.

A man can use wrong or hazardous methods many times before they result in an accident. A person rarely gets hurt the first time he uses a wrong method, probably because he uses instinctive, natural caution. But when an employee is permitted to continue using wrong methods, the supervisor is gambling and allowing him to gamble on his not getting hurt. Sooner or later, the wrong method catches up and an accident occurs.

Cause and effect

Every accident has two parts—a cause and a result. The cause is usually that someone *a*) does something he should not have done (mistake or wrong method) or *b*) fails to do something he should have done (failure to act or use the best method).

To prevent accidents, it is necessary to anticipate and eliminate the acts or omissions that cause them.

Controlling the hazards

How to stop accidents? There is no magic, or easy, formula. Without question, the best way to control hazards is to remove them at their source, if possible. If removing the hazard at its source is impossible, then it becomes necessary to *control* the hazards. Without attempting to oversimplify, such control is best accomplished by:

1. Laying out the job, lining up manpower, equipment, and tools you need; quickly going over what might be required to eliminate or control possible accident hazards; scheduling materials and other facil-

ities for when, where, and how they will be needed.

2. Instructing each employee about methods to be used for each job: Explain equipment and personal protection required; then make sure he understands! Well-instructed employees seldom get hurt.

3. Supervising: After the job starts, follow through with intelligent, positive supervision, keeping in touch with everybody and everything. This assures the supervisor that the best methods are being, and will be, followed continuously.

Tell why and how

Telling a worker to "be more careful," "to work safely," or "not to be careless," without telling him why and how is a waste of time and effort. Work in the department will continue to be interrupted by accidents and near accidents unless all employees are thoroughly instructed, understand their instructions, and are supervised with the firm intention of preventing unnecessary costs through accidents. Make sure each worker:

1. Has been told what his job is and why it is important.

2. Has been shown how to do his job by the right method.

3. Has actually done the job in the supervisor's presence, showing that he understands what he has been told.

4. Is thereafter regularly supervised to make sure he is continuing to do his work as he was instructed.

Controlling Safety Hazards

1. Lay out the job. Line up manpower, equipment, tools.

2. Instruct employees. Explain required equipment and personal protective devices.

3. Supervise; follow through.

Most people are pleased to display their knowledge—so, in those talks with each employee (and an intelligent supervisor will talk!):

—Make it clear accident prevention is for his benefit.

—Let him tell about his ideas. This often leads to a better way to do a job.

—Show your appreciation of his interest.

If an injury does happen . . .

If a worker is injured, he must receive prompt and adequate care. This means at least first aid for every injury, no matter how minor it may seem. *Under no circumstance should a supervisor permit an injured person to be moved until he is sure that he will not make the injuries worse by doing so.*

An injury serious enough to report may result in a compensation claim. Immediate action to compile and report all available information is most important. Comments or statements of people working with the injured man are necessary. Knowledge of all circumstances and contributing causes in the work area

at the time of injury will be valuable.

It's important to take prompt action to eliminate or control hazards, and thus prevent a recurrence. If the cause is beyond the supervisor's immediate jurisdiction, it should be taken up with those who can do something about it, before another person is injured.

Before the injured employee returns to work, discuss the cause of his injury with him and his fellow employees. In this way, everyone will receive correct information and will become aware of a hazard that might have been overlooked.

You make it clear

The supervisor—and usually *only* the supervisor—can make accident prevention click. Company policy, engineering changes to eliminate hazards, the safety specialist who can advise and assist—all are important. But first-line supervisors are chiefly responsible for the prevention of accidents because they know their people best and work closest with them.

The supervisor must be convinced, if he is to be convincing to his people, that preventing injuries is their personal responsibility to themselves, their families, and their fellow employees.

Be a salesman

It is important for the supervisor to continue selling accident prevention by:

► Setting a good example, by being slow to blame "carelessness" or "inattention to the job" for all accidents or injuries. Lip service fools no one.

► Watching for and correcting unsafe methods and conditions.

► Encouraging employees to make suggestions for improved methods. A good listener can learn a lot from the man doing the job.

► Arousing pride in a successful record. The spirit of competition is a healthy, desirable focal point for interested participation.

Supervision can sell employees the idea that accidents are unnecessary. Employees may not be quite as interested in smooth production as their supervisors are, but they are very much interested in themselves.

TODAY'S CITY DWELLER in the United States is almost as healthy as his country cousin, according to the Health Information Foundation. Back in 1901, a resident of New York City could expect to live seven years less than the average for the whole country. Today, however, the average New Yorker has practically the same life expectancy as the rest of the population. The city dweller's improved health, says the Foundation, is due to medical advances and a higher standard of living, which have eliminated the plagues and epidemics that once took a heavy toll of city populations.

—*Advertiser's Digest*

Let's talk about

By Wilbert E. Scheer
Personnel Director
Illinois Blue Cross-Blue Shield

Maybe you can't expect 100%; but even a small improvement can make a big difference.

ANY ATTEMPT to help a supervisor increase his personal efficiency should logically begin with a definition of efficiency. Yet a definition, by itself, is useless. It's easy to state—but difficult to put into practice.

The dictionary definition of efficiency is "effective operation as measured by a comparison of actual and possible results." An office or plant working at 100 per cent efficiency would be operating right up to the limit of the capacity of every person employed, every piece of equipment, every square foot of space.

No one has ever attained this ideal operating standard. The truth is that we can't expect 100 per cent efficiency—but we can and should expect to *improve* efficiency. We can improve our use of all the resources we have available: Money, methods, materials, and personnel.

Human potential

When we look for improvement, we often think in terms of procedures and machines. It's true that work simplification and methods improvement are substantial contributions to more efficient operations. But even the startling and revolutionary applications of electronics and computer equipment pale into insignificance compared with the potential of the human will to work.

It is generally accepted that people seldom, if ever, work up to capacity. The fact that latent skills and abilities exist is demonstrated

in the example of the drowning man who somehow reaches safety without knowing how to swim. Citizens of a country at war will perform incredible feats of strength and stamina in defense of their homeland.

But under ordinary circumstances, people coast along at a much slower pace, which is accepted as satisfactory. Psychologists do not agree on the percentage of capacity used in normal work performance. The most common estimates range from 15 to 50 per cent. These studies reveal that workers are using less than half their potential. Therefore, a vast reservoir of human productivity is waiting to be tapped.

" . . . from small acorns"

Workers cannot be expected to perform regularly and consistently at full capacity. But even a small improvement would produce phenomenal results. It is estimated that if we could increase our human productivity by only 1 per cent (which would still permit at least 50 per cent inefficiency), the nation's total annual gain would be 600,000 man-years, or 150 million man-days—or enough to operate United States Steel, General Electric, and International Harvester for one year.

Last frontier

Our present rate of productivity, which is good enough to provide the highest standard of living on earth, still reflects extravagance in the use of human resources. With skilled labor in short supply, a growing emphasis on cost cutting, and competition getting tougher, how much longer can we afford the luxury of squandering our greatest natural resource? While we can point with pride to the headway we are making along technological lines, we must make similar accomplishments with human potential.

Not science, but human nature, is industry's last frontier—in which every worker has a stake and in which every supervisor is a potential explorer.

Although some waste is inevitable —possibly justified—we must never become resigned to accepting this waste. We must probe continually for ways to minimize it.

Motivation for efficiency

No one can tell the supervisor how to do this. He alone knows his people and the conditions under which they perform. However, we can suggest that the best way to motivate workers to more and better production is by helping them derive greater personal satisfaction from the work they do.

In his efforts to install cost-cutting methods or labor-saving techniques, the supervisor should not overlook the impact these changes may have on people. Scientifically sound procedures can do more harm than good unless there is also understanding. Without understanding, there cannot be acceptance, and

without acceptance, how can we achieve profitable productivity?

When we hire workers, we are not buying people. It could be said that we are buying a certain amount of their time. But actually, we are trying to buy results. Since these results are realized through people, we must focus our attention on people—and not on things.

The goal is progress

A good supervisor believes in people. He genuinely likes people—and by his words, actions, and beliefs, he lets them know this. He likes his own job; he lives it, and gets excited about it. This enthusiasm rubs off on workers and stimulates them to an appreciation of their jobs.

As we try to increase the productivity of our workforce, we don't have to try for 100 per cent efficiency. Every percentage of increase in efficiency shows progress. And progress, not perfection, should be our goal. ♦

Don't Blame the Weather!

EXCESSIVE SPEED was by far the biggest single cause of traffic accidents, which caused more than 2,825,000 injuries and 36,700 deaths on U. S. highways during 1958, according to The Travelers Insurance Company.

It was estimated that speed killed and injured nearly 1,000,000 people in the United States last year—about 40 per cent of the total.

Cars that did not have the right of way were involved in 25.2 per cent of the accidents. They caused a total of 608,400 injuries and 3,890 deaths during the year. Reckless driving was blamed for 10.4 per cent of the injuries, cutting in for 4.0 per cent, and improper signaling for 3.6 per cent.

Crossing at intersections was the chief cause of the 7,700 pedestrians killed and 245,800 injured. An approximate total of 10 per cent of pedestrians were injured while crossing *with* the signal, as compared with about 7 per cent injured crossing against the signal.

It was reported that 97.1 per cent of the drivers involved in fatal accidents had more than a year of driving experience; that 87.9 per cent of drivers involved in fatal accidents were men; that 87 per cent of the vehicles involved in nonfatal accidents were passenger cars; and that more than 95 per cent of the cars involved were in apparently good condition at the time of the accident.

Dry roads prevailed in 78.3 per cent of the fatal crashes and 70.1 per cent of the nonfatal accidents. The weather was reported clear in 84.2 per cent of fatal pileups and 79.5 per cent of the nonfatal mishaps.

Almost half of all traffic injuries resulted from weekend accidents.

Age and the Well-Worn Golf Club

A WELL-USED LIBRARY and a well-worn golf club may be one answer to the problem of aging, according to a Michigan physician.

Dr. Frederick C. Swartz, chairman of the American Medical Association's Committee on Aging, refutes the idea that a person's abilities and functions decline as he grows older. "Studies show that men are continuing to excel in sports like baseball and football at ages that, a few years ago, would have been unthinkable," he says. "A person who keeps physically fit by regular exercise is able to stave off the so-called effects of aging for six to eight years."

Studies of the body's chemistry, blood supply, oxygen use, endocrine glands, and lung capacity show little variation between young and old people, he claims. The real difference seems to be in the way in which a person responds to stress—"and the difference between an older and a younger person's reaction to stress may be lessened if exercise and training are carried on throughout life."

Dr. Swartz also reports that, according to other studies, mental powers do not decline after middle age. Thus, he concludes, "a person can help prevent premature senility and physical deterioration if he will use his mind and exercise his body."

". . . Explain the situation—don't just say I'm 'tied up'!"

The Case of the Chronic Complainer

JOE DECKER supervises Tom Bowers and seven other employees who handle customer complaints. Tom has worked for the company ever since he graduated from high school 28 years ago. Six years ago, he was promoted to his present job.

Tom: Joe, there's something wrong again with that air conditioning. I still get a cold draft down my neck. You'll have to do something about it.

Joe: I don't know what more we can do, Tom. We've moved your desk around, and had the air-conditioning system checked twice by the engineers.

Tom: Well, I'm telling you how it is. Maybe these young guys around here can stand the chilly blasts, but I can't.

Joe: Last week you said it was too hot in here. Two weeks ago you were bellyaching about the new fluorescent lights. What's come over you, anyway?

Tom: Nothing's come over me. I just want a healthy place to work, that's all. I should think you'd be in favor of that since you'd get more work out of me. That's all you want me around here for, isn't it?

Joe: Okay, Tom. I'll ask the engineer to check the system again.

Tom has become a chronic complainer for the past year or two, and Joe can't figure him out.

Tom's over-all record has been satisfactory. He has always scored high in appearance, attendance, and work output. He has a pleasing voice, and he handles customers' complaints patiently and politely.

This case has been condensed from a filmstrip, *Motivating the Long-Service Employee* (part of a series on "Supervisory Problems in the Office"), produced by the Text-Film Department of the McGraw-Hill Book Company, Inc.

The letters he writes aren't exactly masterpieces, but they're usually adequate. However, when an unusually tough case comes along, he often has to ask his supervisor for help.

Tom's current rating form shows one very weak score—on attitude. This has developed only within the last year or so, since he's been griping about working conditions, salary, and assignments.

It's pretty plain that he's developed an animosity toward Dave Blair, a young man in the group who came up the promotion line quickly and does an excellent all-around job.

Then one day, Tom was out sick. Joe took some work from Tom's desk and walked over to Dave.

Joe: Dave, I'd like you to work on these cases. One of them is a real toughie that Tom has been struggling with. See what you can do with it.

Dave tackled the tough case first. He made a few calls, and in about an hour he was able to satisfy the customer. Then he sandwiched in the rest of Tom's cases with his own and finished them.

The next day Joe stopped at Dave's desk:

Joe: Dave, here's a nice letter on that tough complaint you handled for Tom yesterday. The customer thought so much of how you settled it that he wrote us a letter of appreciation. That kind of work will *get* you places around here.

That very afternoon, when Dave went over to Tom's desk to discuss the next step on a complaint they both had worked on, he was amazed to find Tom snarling like a tiger.

Tom: What are you asking *me* that for? I thought you were the smart one around here. You're pretty good at solo flying.

Dave: What do you mean by that?

Tom: You know damned well what I mean! You've been trying for months to show me up. I didn't think, though, you'd stoop so low as to use a man's work while he's out sick.

Dave: Use your . . . ? What are you talking about?

Tom: That letter from the customer. I bet you sneaked it up to Joe's desk so he'd find out what a swell job you did on my case.

Dave: I never even *saw* the letter. How stupid can you get?

Tom: I'm *stupid*, am I? I wish we were outside and you said that!

Joe: Hey, you two, break it up!

I want to talk to each of you alone. Dave, you first; come to my office.

Joe: Now, what happened out there, Dave?

Dave: It was a surprise to me, Joe. All I did was start to discuss a case we'd both been in on, and for no reason at all he got real nasty. He's been hard to get along with for months. What's eating him, anyway?

Joe: Dave, you're a lot younger than Tom and you've done as well as he has in much less time. He resents you, and I don't know what to do about it. As I've told you before, you'd better stay away from him as much as you can.

Dave: Okay, Joe, I'll do that.

Next, Joe gets Tom in his office and asks for his side of the story.

Tom: Dave has been insolent and nasty to me for a long time. It's high time you or somebody else told that young squirt off. He can't insult . . .

Joe: Just a minute, Tom. In what way has Dave been nasty to you? This is news to me.

Tom: Well, it's his attitude more than what he does that gets me mad. He just came up too fast for his own good, and it's gone to his head. There are a lot of young hotshots around here who think they know it all. And management in this place *encourages* them.

Joe: How do we do that, Tom?

Tom: They always get the lion's share of attention around here. . . .

Joe: Now, wait a minute, Tom. I commend Dave a lot, it's true. But I've commended you, too, when I thought you deserved it. I commend excellent work, no matter who does it.

Tom: Yeah, but what about the special treatment Dave gets?

Joe: What treatment?

Tom: You have him up to your desk two or three times a day to talk over his ideas on tough cases. But *my* cases you send back to me with written comment. Why?

Joe: Dave is the youngest man on our team. You've been on the work a lot longer. He's still got things to learn.

Tom: Come on . . . I'll bet he's got a better rating than I have. If he's still learning, how come you consulted him last week on our new form letters? I didn't get in on that.

Joe: Well, I figure he might have a new slant on things. And as for my sending your cases back with written comments, Tom, when I *used* to talk them over with you, we got into a lot of arguments.

Tom: Not arguments—just a difference of opinion. Ah, you management guys are always dishing it out. Can't you *take* it?

Joe: Yes, I can take a difference of opinion, but I don't always have time to argue things out for 15 or 20 minutes . . . and on this complaint of yours about Dave, I'm afraid we're going to have a difference of opinion there, too. But I'll look into it. I'll let you know in a couple of days.

Tom: Oh, never mind! What's the use? This is getting to be a weird place to work. I settle complaints from *customers* all day long, but I never get anywhere with a complaint of my *own*. What a phony open-door policy this place has on employee complaints!

Joe: We *have* an open-door policy on employee complaints—*real* complaints.

Tom: I've *got* a real complaint, but what's the use? Look at what happened just now. The way you handled things, I knew right away I was behind the eight-ball.

Consider these questions—and ask your own:

1. How did the quarrel between Tom and Dave start?
   ____When Dave tried to consult Tom?
   ____When Joe commended Dave for doing Tom's work?
   ____Earlier? If so, when? _____
2. What do you think of Joe's treatment of the quarrel? For instance:
   - What about the advice he gave Dave, to "stay away from Tom as much as possible"? _____

- How about his handling of Tom's accusations? Though he is superficially right, he doesn't seem to have changed Tom's feelings. _____

- Is Tom really angry at Dave—or is he angry at the fact that he feels Joe has put him on the shelf? _____

- What were the warnings before the flare-up? _____

3. Up to now, Tom has been doing an acceptable job, even though he is not a candidate for management development. Considering this, how do you think Joe could have given him more of a feeling of individual recognition? (Consider a combination of measures, rather than just one remedy.) _____

4. Do you have any employees like Tom in your department? How are you dealing with them? _____

HOW DID YOU SOLVE THESE CASES?

If you've discussed these cases at the plant or at home, or if you've done some thinking about them—what did you come up with? We'd like to know your ideas and comments. Send them to Let's Get Down to Cases, Supervisory Management, 1515 Broadway, New York 36, N. Y.

CHOOSING A CHILDREN'S CAMP

By Ernest Osborne

With the right choice, they'll be "having a wonderful time."

THIS SUMMER, about eight million American children will be going to camp. Should yours be one of them? If so, how do you choose a camp? And what can you expect the camp to do for your child? Before you make your decision, consider these questions:

1. Is your child ready for camp experience? Not all children can benefit from attending camp. For instance, it is extremely questionable whether a child under six should go, unless the family situation necessitates it. Some children might be overstimulated by camp experiences. Others may have interests they can follow better outside of a camp.

If you decide that camping *is* desirable for your child, it's a good idea to help him get ready for the summer. He should be allowed to help select the camp. If he has never been camping before, he should, if possible, be taken to visit the camp. He might benefit from seeing camp movies and talking to others who have been to camp. If a child has never been away from home, it's wise to give it a trial run: Have him

stay overnight at friends' homes occasionally.

2. Is the camp a general or a specialized one? Is the program organized or informal? Camps are often classified as either traditional or progressive (although most fall somewhere in between).

In traditional camps, the activities are carefully planned and organized, with comparatively little choice for campers in the selection of activities. There is usually heavy emphasis on athletics and on competition, with some system of awards.

Nontraditional or progressive camps offer campers a free choice of activities. They are often encouraged to help decide on the camp program. Athletics are not likely to be the dominating activity—and, for the most part, they are less competitive.

3. Is the camp program varied, well balanced, and flexible to fit your child's needs? Most camp directors, whether traditional or progressive, agree that a variety of activities is desirable, especially for younger children. In spite of this, however, certain activities—usually athletics—are often given so much attention that crafts, art, nature study, and other activities are pushed into the background.

4. If it is a specialized camp, does it offer the kind of program most suitable for your child? For teen-agers, particularly, the specialized-interest camps may have much to offer. These camps stress one particular activity: riding, sailing, music, language, woodcraft, nature, athletics. Such camps are usually staffed with people skilled in the activity stressed by the camp.

5. Are there enough well-trained, interested counselors? The people who live and work most closely with the children are usually far more important than the camp's program. If the counselors like children, understand them, and try to see that the camp experience is a good one for them, it probably will be a good one.

As a rule, there should be at least one counselor for every eight children, and most of the counselors

This article was adapted from *How to Choose a Camp for Your Child*, by Ernest Osborne, published by the Public Affairs Committee, 22 East 38th Street, New York 16, New York. Available from them for 25 cents for single copies; special rates for quantities.

should be at least 19 or 20 years old. They should be college students or graduates, trained in educational methods, and with a knowledge of child development.

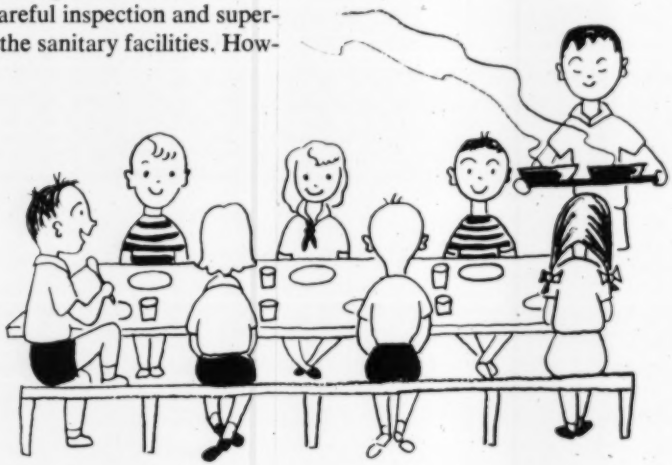
6. Do you have confidence in the director's experience, educational views, abilities? Directing a summer camp effectively requires a considerable variety of skills and personal qualifications, including business and administrative ability. But even more important to consider are these questions: Do parents whose children have gone to his camp like him? How much understanding of children does he seem to have? Do you feel you can count on him to be straightforward and honest in talking about his ideas and his camp, or do you have the feeling that he is always "selling" something?

7. Are the sanitary and health facilities adequate? In most states, there is careful inspection and supervision of the sanitary facilities. However, two questions which may not fall under state regulations should be considered: 1) Is there a sufficient number of sanitary toilet facilities and are they within reasonable distance? 2) What provision is made for hot baths and/or showers?

8. Is the food nutritious and tasty? Most camps have the services of a well-trained dietitian who sees to it that the food meets the children's nutritional needs. If there is no such professional service, a careful check on menus of past summers would give some indication of the nutritional balance of the meals.

Most states require health examinations for anyone who handles food in camps. You might check such regulations in your state.

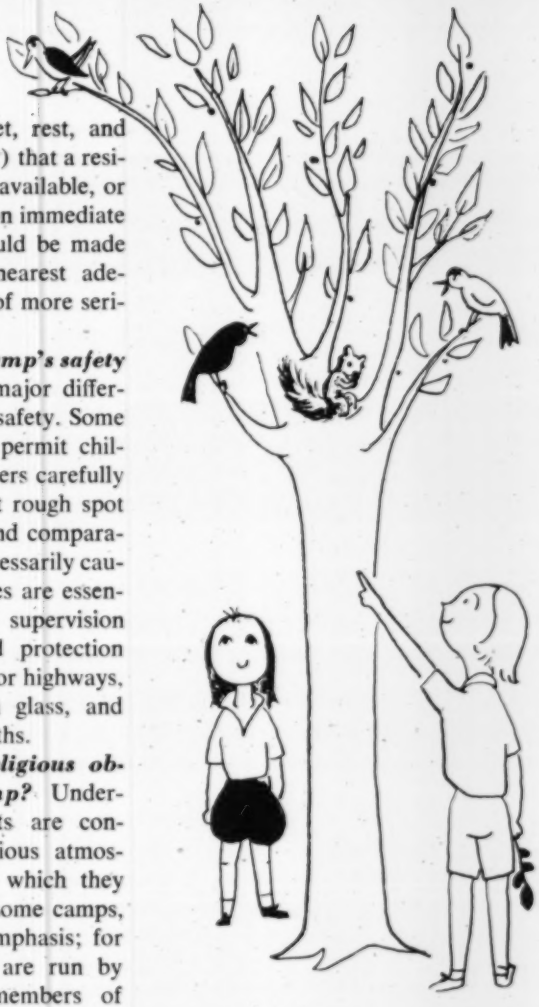
9. Is there adequate provision for medical attention? You should be able to expect 1) that a place will be provided where the child who



needs it can have quiet, rest, and medical attention; and 2) that a resident nurse or doctor is available, or that a nearby doctor is on immediate call. Arrangements should be made for admission to the nearest adequate hospital in cases of more serious illness or accident.

10. What are the camp's safety practices? There are major differences of opinion about safety. Some camp directors do not permit children to climb trees. Others carefully smooth out the slightest rough spot in camp paths. These and comparable practices seem unnecessarily cautious. But some practices are essential, such as care in supervision of the waterfront, and protection against hazards like major highways, railroad tracks, broken glass, and exceptionally rough paths.

11. What about religious observance in the camp? Understandably, most parents are concerned about the religious atmosphere of any camp to which they send their children. In some camps, religion is the major emphasis; for example, many camps are run by religious groups for members of their faith. Other camps are unrelated to any one religious group, and services are held to appeal to children of different religious backgrounds. If you want your child to maintain close contact with his religion, you should consider, then, the religious auspices, or the religious services available to campers.



12. Are housing facilities adequate and attractive? The kinds of structures in which the campers live are not as important as the way they are constructed and maintained. Well-maintained tents, for instance, with properly built floors raised off the ground can be just as satisfactory and a lot more fun for children than cabins. Whatever the type, the hous-

ing should be placed so that it is exposed to the sun several hours each day.

13. Are the costs reasonable for the services provided? Summer-camp costs may range from $15 a week, for a camp conducted by an organization like the YWCA, to $1,000 for the summer for a private camp. But the size of the fee doesn't necessarily reflect the quality of the camp. It's a good idea to check on extra fees that may be charged for transportation to and from camp, uniforms, laundry, arts-and-crafts materials, trips, and the like.

14. Is the camp a happy place? Do campers want to return? If you want an adequate picture of a camp, try to see it in operation the season before the summer you are considering. This, of course, may be difficult. But if you feel that the director, the parents whose children have recently attended the camp, and the children themselves have given you an adequate picture of the camp, you can probably assume that your child will have a wonderful time. And that is the most important criterion of all! ♦

The Stronger Sex?

WOMEN GET SICK oftener than men, according to figures for the year July, 1957-June, 1958, released by the Department of Health, Education, and Welfare. They average 2.7 attaeks of acute illness per year as compared with 2.5 for men.

The figures include illnesses and injuries severe enough to require medical attention or restriction of activity.

Children had the highest number of illnesses (4.0 per child under 5); and old people, the lowest.

The survey showed that 356,500,000 days of work were lost as a result of acute illnesses. Two thirds of the illnesses (causing two thirds of the time out) were ailments of the upper respiratory tract.

The survey was based on interviews of 115,000 people, picked from a cross-section of the population.

Digests of the month

Incentives That Don't Cost a Cent

IN ALL THE TALK about better motivation of employees, some simple but powerful incentives are often overlooked. They are basic needs that can be found in most people, whatever their jobs. These motivators cost nothing to use—but they can cost plenty if they are ignored. The employee who cannot satisfy these needs on the job won't give his company the full benefit of his talent and energy.

Here are four of these incentives, and some examples of how they have brought out the best in employees:

Everyone wants to do the right thing.

An employee will make every effort to do what is right—if he feels that the boss believes he will.

In 1942, many of the 10,000 trainees at the Kaiser shipyards in California wanted to be promoted before the end of the 180-day training period specified in the union agreement. Every day at least one trainee asked the training director for a promotion.

The director told each man how much extra money he could get if he were promoted immediately. He was asked to balance his pay increase against the loss of his training time and the fact that he would not have really earned his promotion. The director closed each interview by saying, "I believe you want to do the right thing. Think it over tonight, come back tomorrow, and if you say you want your promotion right away, I'll sign your rate change."

Very few men came back the next day.

When a manager shows his confidence in the motives and intelligence of his subordinates, they will do their best to prove worthy of his trust. On the other hand, a show of mistrust will only earn resentment.

Everyone wants to find better ways of doing things.

Most employees will respond to a request for help in solving a specific problem that concerns them.

At a Georgia rayon mill, there was no mutual confidence between employees and management. Management felt that because the employees had voted a union into the plant, they were no longer interested in helping the company to improve its position. The plant manager said bitterly, "The employees will strike if we try to improve even one operation."

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Because management mistrusted them, the resentful employees made no effort to do their best. Productivity dropped. Yarn waste climbed over 85,000 pounds a month—an intolerable 11 per cent of total production.

It took a new plant manager to do something about the situation. With top management, he analyzed the human-relations problems. The managers soon had to acknowledge that they needed a change of attitude.

As a result, the executives encouraged supervisors to ask employees for help in working out specific operating and human-relations problems. This brought about a substantial increase in mutual confidence. Operating improvements were suggested and adopted. Within five months, the waste problem was brought under control. Sales rose steadily.

By showing confidence in the employees' desire to improve operations, management had stimulated their best efforts.

Everyone wants to belong to a group that achieves the extraordinary.

During World War II, the toughest job in the shipyards was scaling rust off steel plates on prefabricated sections. Working in a double bottom only three feet high, scalers had to put up with a fog of rust dust, deafening noise, and steaming heat.

In one big shipyard, the scalers resented the fact that the union contract prevented them from earning journeyman pay for their tough work. They expressed their resentment by slowing down their work.

A young lead man was promoted to foreman of the scalers, after several experienced foremen had turned down the job. The new foreman took on the job of changing the scalers' attitudes. He told them that it was true they had the worst, toughest job in the yard. "But," he said, "somebody's got to scale off the rust. When you walk through this yard, everyone who sees you wearing a scaler's button knows that you must have what it takes or you couldn't stick with the job."

The scalers responded to this approach. Taking pride in belonging to a group that was doing the extraordinary, they sped up their work.

Everyone wants to receive recognition for doing a good job.

In a New Jersey steel-fabricating plant, a foreman told his fellow supervisors that some men resented a pat on the back. He said he'd recently complimented a mechanic for a job well done and the man had responded with bitter antagonism.

A few days later, the foreman reported a revised version to his associates. "I talked to the man again," he said, "and my face is pretty red. He told me that the reason he was angry was that he had been working under me for 15 years and this was the first time I ever bothered to single him out for praise."

• *Jack Wolff*
MANAGEMENT METHODS
Vol. 15, no. 4

POLITENESS is to human nature what warmth is to wax.
—ARTHUR SCHOPENHAUER

Ideas Are Made—Not Born

DO CREATIVE IDEAS just happen—or can you help make them happen? The experience of the greatest thinkers leads to the conclusion that there is an *orderly* process of the mind in creative work. This process can be outlined in six basic steps:

1. *Get a complete, clear, objective understanding of the situation.*

Anyone seeking creative ideas about a specific situation should first become completely familiar with that situation. He must hold back on ideas and get the facts, by asking questions with an open mind.

2. *Develop a clear statement of the objective of the project.*

How many times have you had this experience? A project is started and a "fine" idea developed. Everyone gets to work on it. Then a few days later comes the word: "You can't do that because . . ." And the people who develop the idea say, "Another fine idea shot to hell."

But was it a fine idea in the first place? It didn't fit the situation. Perhaps it didn't have an accurately stated objective. No matter how fine an idea may seem, it is useless unless it meets the needs of the situation.

Writing down the objective will make it easier for you to be accurate. Strip it down to its essentials to make sure that it is completely clear.

3. *Start the creative process.* This means letting the mind loose to produce in its own way. Surprisingly, the best thing to do at this point is to stop thinking consciously about the project. The objective should be read over from time to time, perhaps before you go to sleep at night. In this way, the subconscious is prepared for work on the problem.

The subconscious mind is a storehouse of knowledge. It can help to solve a particular problem by bringing into interplay much of this stored knowledge. It works particularly well when there has been adequate conscious preparation.

This explains why you may get an idea while shaving in the morning, or why you may jump out of bed in the middle of the night with a solution to a problem you have been working on for days.

4. *Getting ideas.* After giving the subconscious a chance to work on the problem, the next step is to sit down and start writing out the ideas that come to you. Every idea should be recorded, no matter how unlikely it seems. A helpful method is to put each idea on a separate sheet of paper for consideration later.

5. *Evaluating the ideas.* This is the sorting-out process. Often, group thinking can be helpful here, since the total experience of a group is likely to produce sounder judgment than the single evaluation of an individual can produce.

Although this is just a brief outline of a methodical approach to getting creative ideas, it should be useful as a reminder of the fact that many creative ideas are made—not born.

• *Frank A. Armstrong*
SALES REVIEW
Vol. 13, no. 2

Why Meetings Go Wrong

"WHAT WENT WRONG?" That question plagues the manager who has conducted an unsuccessful meeting. The problem that was to be solved by the meeting remains unsolved. Some members failed to participate. Those who did offered no ideas of their own. The meeting was a total waste of time.

Where did the manager fail? One answer—based on the National Industrial Conference Board's analysis of post-mortem discussions of 700 practice sessions in conference leading—is that he probably fell into at least one of seven common pitfalls:

1. *Inhibiting free, objective discussion.*

What the leader says and how he says it can easily influence the thinking of the group. Leading questions, for example, immediately introduce bias into the discussion. Or the leader may suggest arguments for consideration so that he gives the impression that these are his own views on the subject. Undiplomatic statements by the leader can cause hidden antagonisms which tend to inhibit participation. Voice inflection and facial expression often reveal bias.

2. *Keeping the meeting going at top speed.*

Some managers are too impatient when they conduct meetings. They tend to become restless if the meeting does not move at jet speeds, instead of relaxing and letting the mental wheels revolve at their own pace. Because these leaders feel they are failing in their job if someone is not speaking at all times, the slightest lull is their signal to jump in and move the meeting along.

The result is that the leader does too much talking. He comments after each contribution, and his comments are likely to be judgments on the contributions. Or he may throw out leading questions so that he will be sure to get the "right" answers and avoid wasting time on "nonessential" ideas.

Under this pressure, the group will probably give the leader what they think is acceptable to him. The meeting can then be adjourned, everybody can get back to his daily routine, and the leader has the solution he wanted. But the meeting has been a failure because he did not permit the group to think through the problem and give him their own ideas freely.

3. *Using too many "direct" questions.*

In general, successful meeting lead-

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ers avoid calling on a specific member of the group by name, unless they have a very definite reason for doing so. For the most part, a good leader will ask the group questions, so that whoever is ready and able can pick up the idea and take it from there.

Some leaders fall into the questionable practice of calling on each member in turn for his comments on a subject. By creating the atmosphere of a schoolroom recitation, they inhibit the members' free expression.

There are, of course, instances in which direct questions are called for:

- To bring before the group a particular viewpoint which the leader knows a specific individual is ready to talk about.
- To give a shy member the opportunity to say what he has on his mind.
- To break up a long-winded monologue.
- To stimulate debate when the leader knows that a member has views opposed to those just expressed.

4. *Lack of control.*

Although a meeting leader should not inhibit free expression, he must always maintain control of the meeting. It is his job to keep the conference moving to a conclusion, to insist that the group stay on the subject, to call the meeting to order when the members become unruly, and even to crack down on an individual who will not cooperate.

If, in his introductory, stage-setting remarks, the leader defines the objectives of the meeting and the problem itself in clear and precise terms, the members will know exactly what is to be done. When the objective is misunderstood or the limits of the discussion are not clear cut, mental wandering, inattention, and confusion are almost inevitable.

In brief, the leader can exercise control by knowing the purpose of the meeting and how to achieve it, by communicating this knowledge effectively to the group, by showing his self-confidence, and by insisting that the members follow an orderly and disciplined procedure.

5. *Lack of preparation.*

There are some experienced leaders who believe they can conduct a successful discussion whether they know anything about the subject or not. But in actual practice, it is a great deal easier for the leader when he has a good working knowledge of the problem in all its aspects.

In preparing for the conference, he will find it helpful to think through the problem for himself. It can be a good idea to have a "dry run" with one or two associates before the meeting. This will brief the leader on all aspects of the issue so that he will be aware of the arguments likely to come up for and against a proposed line of action.

6. *Embarrassing an inattentive member.*

Occasionally a meeting leader may be faced with the problem of a member who is obviously inattentive. The leader may feel that he must bring the member up sharp with a rebuke. But this will embarrass the daydreaming member to the point where he will be much too disturbed to contribute anything to the discussion.

A better approach might be to say something like, "Ralph, Steve has been telling us that our new machine is a dud because it takes two workers to feed in raw materials. We know you've

been working at that machine. Do you think there's any way the job can be done with one man?"

In this way, the leader can establish a more positive atmosphere for a profitable conference.

7. *Failure to organize and record the group's thinking visually.*

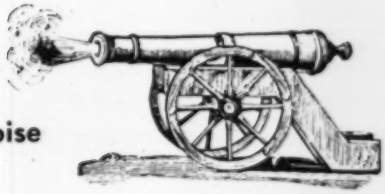
It's not easy for group members to keep in mind all the facts and opinions that are being presented during a meeting. Yet there are many leaders who make no attempt to visualize the progress of the discussion for the group. Consequently, these meetings flounder, much time is lost through needless repetition, and members never know exactly what has been accomplished.

It is the leader's job to record, classify, and organize the thinking of the group visually as the members proceed to a solution of the problem. This can be done with a large blackboard or paper chart. The leader can use the board to summarize each idea as it is presented, so that none is lost in the shuffle. This aid not only reinforces the memory of the members, but helps the leader in his control of the meeting.

• George V. Moser
MANAGEMENT RECORD
Vol. 20, no. 11

"We can't give you a raise, Miss Finley, but we'd like to present you with a token of our continued esteem."

No Noise Is Good Noise



INDUSTRIAL NOISE is no mere nuisance. Exposure to high-intensity noise over a long period of time can seriously damage hearing. And, increasingly, employers are being held liable for such impairment.

The answer to the industrial-noise problem is a well-planned hearing-conservation program. To start with, noise in the plant should be scientifically measured. Measurements should be made with a sound-level meter to determine the over-all sound level in all workplaces where it is difficult for two people with normal hearing to converse at arm's distance. Or, a more complete analysis of plant noise, by skilled technicians, may be necessary.

If measurements show that noise levels are higher than those considered acceptable, noise-control measures should be taken to reduce them.

No standard set of rules can be used to control noise in an industrial plant. A thorough study must first be made of existing conditions to determine the exact type of control measures needed. There are, however, five general approaches to the problem:

1. *Eliminating or reducing the noise at its source:* This is usually the most fruitful approach to noise control. In the case of machinery, the reponsibility for reducing noise ordinarily lies with the manufacturer. With good engineering design much, if not all, of the noise can be eliminated. However, equipment already in use can, in many instances, be modified to reduce noise. Good maintenance programs also aid in keeping noise to a minimum.

2. *Changing the work process:* For example, spot, arc, or flame welding may be substituted for riveting in certain operations. While substitution may be possible only in certain instances, it should always be considered.

3. *Isolating the noise source:* Noisy processes may be removed or walled off from areas that would otherwise be relatively quiet. In this way, the fewest possible people are exposed to the noise. Those who must be exposed should be provided with ear protectors.

When it is not practical to isolate or enclose a whole machine, it may be possible to provide small enclosures lined with sound-absorbing material to cover the parts that cause the greatest noise—gears or other noisy parts.

4. *Using resilient mountings:* Rubber or other resilient mountings will, in some instances, reduce noise and cut down vibrations.

5. *Using sound-absorptive materials:* High-frequency sounds may be absorbed by acoustical materials, such as prefabricated acoustical tiles, acoustical plastics, sprayed-on compositions, and blankets fabricated from any

porous material, like glass wool. Remember, however, that acoustical treatment cannot reduce direct noise, though it is highly efficient in decreasing reflected noise.

Environmental control in some situations is difficult; and even where noise-control measures have been adopted, the noise exposure may still be too high. Then it is necessary to use ear protectors.

It's up to the supervisor to sell employees working in high-noise areas on protecting their hearing. Ear protectors can be as important as safety goggles, safety shoes, hard hats. A hearing-protection program is, therefore, no different from any other safety program designed to eliminate or reduce an industrial hazard.

Ear-protection devices should be provided for all employees who need them. There are three basic types available for industry: ear plugs, ear muffs, and helmets. Selection should be made on the basis of suitability, comfort, and cost; and, most important of all, the device should be properly worn.

• *Edward G. Meiter*
NOISE CONTROL
Vol. 3, no. 6

A Supervisor Is a Supervisor Is a Supervisor

GOING THROUGH THE PLANT one day, the general manager of a textile mill noticed a man busily moving cartons from an aisle where they were in the way. A few words from the manager turned the man's face red with embarrassment. He rolled down his sleeves, tightened his collar and his tie, and hurried into the foreman's office—which belonged to him.

The words that had produced the embarrassment were, "Tom, who's managing this department while you're out here doing this manual work?"

The supervisor's job requires him to be a leader and an administrator, but he may still see himself primarily as a conscientious manual worker or skilled technician. Supervisors trapped in this conflict must get a clearer picture of the differences between a manager and a worker. Some of these differences:

1. The employee is responsible for himself and his own work. He's interested in his own pay rate, privileges, growth and development. The supervisor must think in terms of the group. He has to be interested—and show his interest—in a number of people and their work, pay, privileges, and opportunities.

2. The worker doesn't necessarily have to think beyond the immediate day's work. The manager, on the other hand, must plan ahead. If he's a good manager, he has long-range as well as short-range plans—goals he'd like to reach, such as improved methods, lower costs, higher quality and quantity, greater safety. If he sees no further ahead than the day's work, he's not acting like the manager he's supposed to be.

3. To an employee, it's important that he gets *his* materials when he needs them, *his* machine is in good

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running order, *his* area is kept clean. To the supervisor, it is important that *all* machines, *all* areas, *all* materials are properly serviced. The supervisor who has a pet operation or who gets so involved in the breakdown of one machine that he neglects the needs of the rest of the department is not being a manager.

Between the supervisor's role as the boss in his own department and his role as a subordinate to higher management is a dangerous pitfall: inconsistency.

This inconsistency can be illustrated by an imaginary supervisor named Frank. He strides through his large shipping room with his chest out. He's in command and he knows it. All these people follow his orders and bring him their problems. He's a big man.

But when Frank's bosses come into the shipping room, Frank wilts. He is so obsequious, he even looks smaller. Frank throws his chest out again. But the men in the shipping room grin behind their hands and wink secretly at one another.

There are several steps a supervisor can take to make sure he is fulfilling his role as a manager:

1. *Define your job.* Learn just what is expected of you as a supervisor, what functions you are supposed to perform, what responsibilities you have, and what authority you have. You may have to talk with your boss to clear up these points. Often the quickest and best way to get a full understanding of everything a job entails is to write out a description of the job. Find out what your boss thinks about your description and what changes he would make in it.

It may help to talk over your job with other supervisors at your level and at different levels.

2. *Identify your status.* Make sure you know where you stand in relation to other levels of management. How great are your responsibilities and authority in comparison with those of other managers?

3. *Act according to your status.* Once you know what your role is, don't deviate from it. Be consistent in your dealings with both subordinates and superiors, and there will be no question of your status as a manager.

• *S. G. Williams*
TEXTILE WORLD
March, 1959

Budget for Balance

WE LIVE IN A WORLD that revolves around getting and spending. Necessity and custom both dictate how we shall do much of that spending. Yet we have more choice than we sometimes realize. We can use our own good sense and our own abilities to get our money's worth. When we understand the reasons for our attitudes and our behavior regarding money, we can plan better for its use. Understanding can give us a balance—in our emotions, and perhaps in the bank, too.

—EDITH G. NEISSER
in *The Many Faces of Money* (Human Relations Aids)

Safety: Which Violations Do You Crack Down On?

WHEN AN EMPLOYEE'S violation of a specific safety rule causes an injury, the supervisor is faced with a difficult discipline problem. Should the employee be punished, or should the injury itself be considered enough of a penalty?

Some ramifications of the problem can be seen in the case of a sheet-metal worker who was told to repair a leak in an oil-filter pipe. When he approached the pipe, he saw oil and water on the floor. Ignoring the accident hazard, he started to make the necessary adjustment—and slipped on the greasy floor. The result: a broken wrist.

One of the company safety rules stated "Look for and, if possible, avoid stepping on surfaces covered with ice, oil, grease, wet paint, or other substances creating a safety hazard." If this were not possible, employees were directed to throw sand or fuller's earth on the slippery spot before they walked on it.

The sheet-metal worker had violated a safety regulation and was injured. His supervisor imposed a three-day suspension.

Was the supervisor justified in inflicting this punishment? In this instance the employee had a record of habitual carelessness. During the preceding three months, he had been given four reprimands for minor infractions of safety regulations. His supervisor's decision to discipline him seemed basically sound.

But from the point of view of preventive safety, the supervisor should have asked himself some questions:

Did I discipline the employee because he violated a safety rule or because his violation resulted in an accident? Would I have given him a three-day suspension if I had simply observed him working on a slick surface without having thrown sand on it? Would I have merely reprimanded him once again?

Would it have been more effective from the standpoint of safety training if I had given him a disciplinary suspension instead of just reprimands before the accident?

Was my work order sufficiently clear? I knew from the employee's record that he was careless, and I knew that the conditions of the work area were dangerous. Would an injury have been prevented if I had said, "The work location is covered with oil and water. Don't forget to throw sand on it before you start the job"?

Does the employee think I disciplined him to improve his work habits and for his own protection in the future? Or does he believe I penalized him because his accident marred the department's safety record?

The answers to these questions would reveal a supervisor's attitude toward his safety responsibility. Obviously, if an employee is convinced he has been disciplined only because he hurt himself, he will resent the penalty.

It's true, he may be more cautious in observing regulations in the future. But not for the right reasons. He won't have been sold on the self-interest he has in obeying the rule. He may even think that if he hadn't been hurt, there

would have been no penalty. Thus, he may observe safety rules after the injury only because he fears more punishment. If so, he'll keep it up only as long as this fear reminds him to be watchful. Furthermore, if he resents the penalty, his attitude toward his supervisor may prevent a productive working relationship.

This does not mean you should never discipline an employee who has injured himself in breaking a safety rule. But it does mean you should be certain that the punishment you give is dserved, that the employee understands why he deserves it, and that you did your job in preventive safety training before you applied discipline.

Pretest to Hire the Best

MANY COMPANIES are discovering that hiring better employees and fitting them into the right jobs is made a lot easier by pretesting.

Pretesting services are offered by both the government and private organizations. At no cost to the employer, government agencies will give selected tests (chosen from a battery of over 300) to check the aptitude and ability of a job applicant for any specific position. This year the government expects to test 1.5 million applicants, a new high.

The government does not test workers already employed by a company. But the success of pretesting is leading some companies to hire industrial psychologists to test their employees. One small Midwestern electrical-parts maker spent $1,000 to test and reshuffle a department; it expects to save about $7,500 this year by the change.

Here's how pretesting has worked out for some companies:

One plant says it cut training costs by 60 per cent when it began hiring only pretested workers. Another was able to reduce its training period from 35 to 15 weeks.

One plant reports that its output went up 18.5 per cent when it began hiring pretested workers. Another found that by selecting people with the highest scores it could hire 10 girls able to do the work that 14 untested girls had been doing. An electric company boosted output 11 per cent with high-score workers.

Another company turned to pretesting when it found that some of its employees were incapable of producing more than 58 per cent of standard, while others were producing as much as 139 per cent. The use of pretesting moved the over-all average up from 91 per cent to 110 per cent of standard.

Union reaction to pretesting is generally favorable; in fact, some unions help in devising the tests. This may be because, according to some industrial psychologists, pretesting is expanding rather than shrinking the U. S. labor pool.

Workers in the 35-44 age group are considered the best producers. Yet testing has indicated that 40 per cent of workers over 45 years old can outproduce the younger men, and keep doing it until they are 65. Since the number of workers 25-45 years old is decreasing, while the supply of 45-65-

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year-old workers is increasing, pretesting is an important tool in hiring productive older workers.

Physically handicapped people are another source of productive work. Of the 7 million physically handicapped, 97 per cent are capable of working. And testing indicates that their output averages 1 per cent higher than that of unhandicapped workers in the same age group.

• *K. W. Bennett*
THE IRON AGE
March 5, 1959

Safety Begins at Home

PUT THE WELCOME MAT out for guests in your home—but be sure it is well anchored!

Hosts and hostesses are responsible for the safety of their guests, according to a bulletin distributed by the Greater New York Safety Council. The bulletin recommends that hosts who want to keep their homes safe for guests be sure to check the following conditions:

• Sidewalks and steps should be in good condition, with no cracks or pieces missing.

• Have sufficient lighting around entrances so that unwary guests won't trip on Junior's bicycle or the forgotten carriage or skates.

• Be sure no children are playing near the driveway when a car is driven in or out of the garage, and that no vehicle is left unlocked in the driveway where children may endanger themselves.

• Put nonslip pads or backing under all small rugs.

• Keep books, magazines, pillows, hassocks, extension cords, small furniture out of the way so that the unsuspecting guest won't trip on them.

• Leave guide lights on so that a stranger will have no trouble finding his way about.

• Put all poisons, medications and hazardous equipment out of the reach of small children.

• Remove the key from the bathroom door so little children cannot lock themselves in.

• Be sure toddlers are out of the kitchen while hot food is being prepared, and that matches and table lighters are out of reach.

• Use every precaution where pets are concerned; even the best-natured animal resents being mauled—especially by strangers.

• And finally when you speed the parting guests with "one for the road," make it coffee.

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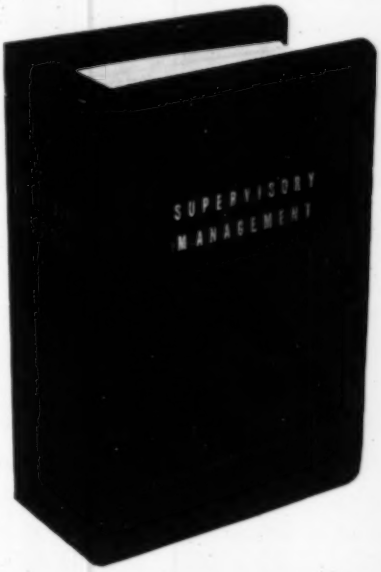

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